

Hobbies

WEEKLY

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Price Fourpence

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THIS particular design of pigeon cote can be hung on a wall or any outdoor building very conveniently. Accommodation is provided for four pairs of pigeons, but, of course, the dimensions can be easily increased to hold any desired number, within practical limits.

As for the timber, deal of almost any thickness can be used, if not less than $\frac{3}{4}$ in. If a choice exists, then planed board of a thickness of $\frac{5}{8}$ in. will be about the best. If tongued and grooved boarding is available, then choose it, as it solves the difficulty of joining boards together in a draughtproof fashion.

First Work

Fig. 1 shows a side section and front elevation of the cote. A general view of the construction is given in Fig. 2. Join

A WALL PIGEON COTE

boards together to make up the two sides, and at top and bottom, screw a $\frac{3}{4}$ in. by 1 in. batten across, shown at (A and C). Screw the $\frac{3}{4}$ in. side to the wood, or nail if you like.

For the middle floor, at (B) screw a third and similar batten across. Make sure the boards are knocked close together before the battens are fixed.

Cut the floor and middle floor to the full width of the cote, and depth, plus the

4 in. wide front shelves. As this depth will be 16 in., two or more boards will be necessary to make it. That part of the floors to go between the sides should be reduced by cutting away each end edge, as in detail (D).

The Floors

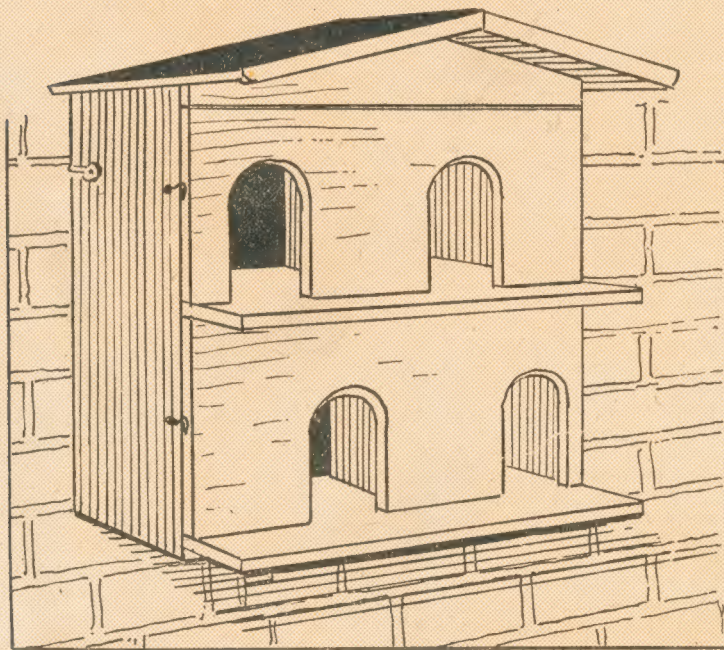
The strips sawn away will be equal to the thickness of wood employed for the sides of the cote, obviously, if the ends of the shelf extensions of the floors are to come level with the outer surface of the sides. Both floors are then nailed or screwed to the battens. No nails need be driven in through the sides, as the fixing will be quite strong enough as it is.

Cut two boards, 4 in. wide, and the same length as the floors. From the centre of each, bevel the wood down to 2 in. at each end. Nail these at back and front of the carcase, at the top, as in Fig. 2. The roof boards will be nailed across these afterwards.

The upright divisions can now be cut, that at the bottom being high enough to stretch between bottom and middle floor, and that at the top, from the middle floor to nearly the top of the roof crosspieces, just mentioned.

Fitting the Division

A simple and strong method of fitting these in position is to opposite sides of a central line, so that both can be easily nailed. The top division is also nailed to the roof crosspieces. It may be found easier to nail in the top division, if the job is done before the middle floor is screwed to its battens, the nailing of the bottom one can be done afterwards.



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Now nail across the boards covering in the back, these starting below the rear roof crosspiece, as this also serves as a back as well, or at least, part of one.

The roof boards are cut 18in. long, so that they form an extension over the front of the cote and provide a welcome shade in sunny weather and some protection against the rain beating the pigeon holes. Bevel these boards to meet together at the ridge, and nail enough across to overhang at the side

central in each compartment, but to one side, so that some protection is afforded against wind and weather.

Their exact position is not important, about where shown in the diagram will be satisfactory, the divisions behind being indicated by dotted lines, as a guide. To prevent the wood being weakened at the ends, by cutting out the openings so close to the sides, a strip of wood, also shown by dotted lines, can be glued and nailed to each,

interior can be left plain or lime washed, as preferred.

The cote should be hung up securely. A good method is to use wall clasps, iron ones, as pictured at (E) in Fig. 3. These can be bought at most hardware stores. They are driven in the wall, be-

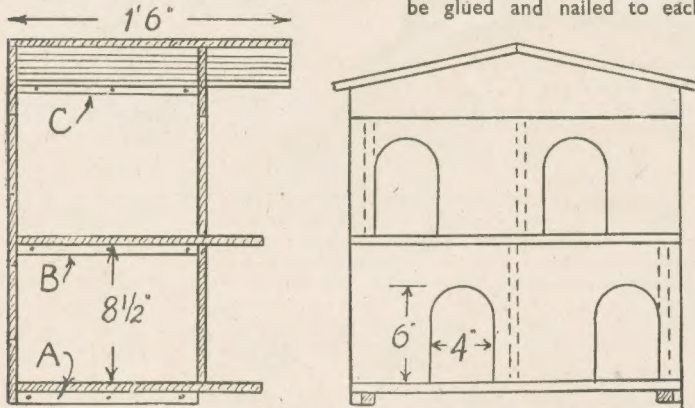


Fig. 1—A section and side view with dimensions

eaves about 1 1/2 in. Cover the roof with felting or Rubberoid, to make it waterproof, tacking the felt to the edges of the roof boards all round.

The front of the cote consists of two boards, filling the space between the shelves and top crosspiece. In these the openings for the pigeons to enter are cut out. These are shown clearly in the front view, in Fig. 1. Do not cut them

just by the side of the openings.

The Front

The two front covers can now be fixed across with hook and eye fasteners, to keep them in place. This very convenient arrangement makes the cleaning out of the cote an easy job. The whole article can now be painted with any good quality outdoor paint. The

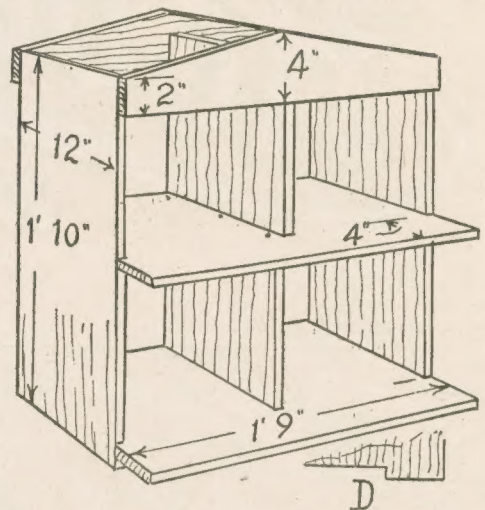


Fig. 2—Details of construction

tween the bricks.

Drive one pair at about the required height, and rest the cote upon them, as in detail, Fig. 3. The second pair can be driven in higher up, and screwed to the sides of the cote.

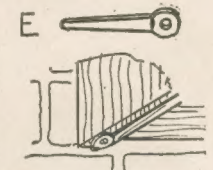


Fig. 3—The wall cleat screwed to the sides of the cote.

From the Editor's Notebook—

THE details for a model of St. Paul's Cathedral which were published last week have already proved exceedingly popular, and I know that a large number are now being made. An interesting comparison in results is to be found in a similar model made by Mr. and Mrs. E. G. Burch of 41 Talbot Rd., Isleworth, from over 3,000 matchboxes and 'bits and pieces'. The replica stands 3ft. 6in. to the top of the cross on the dome and is 5ft. 6in. long. The work took the pair six months to complete, and apart from the matchboxes, the material included corrugated card, biscuit paper, fairy lights, bits of old overmantel and bits of an old lampshade. Boot buttons were used for the door handles.

HERE is a suggestion for 'collectors' with a camera. A photographic friend has made a hobby of getting together pictures of old sun dials and tells me it is astounding the interest and variety to be found. Garden sun dials are fairly common with old houses and estates, and wall dials are to be found in many parts, although a little more

difficult to picture. I was interested, only this summer, in the endeavours being made by an amateur photographer to get a picture of the one on Sandringham House, the King's country home in Norfolk.

MORE and more readers are realizing the value of co-operative effort and I am constantly being reminded of this by various exhibitions of work held in all parts of the country. An excellent example of the result of enthusiasm and happy work was seen at such a display staged by the Scarning (Norfolk) Boys' Club recently, in the local hall. It was all the more interesting in being a model layout of Dereham—which as readers know, is the home of Hobbies. Six ardent lads under their leader, Mr. V. Farrow, had drawn, cut, constructed and laid out a display covering nearly 250 square feet. Parts were cut in wood, painted and then put in their appropriate position. Hobbies Works were there, with other industrial buildings, churches, railway station, main roads, etc. A little artistic licence had been allowed to incorporate a harbour and docks,

because really there is no river at Dereham! However, the Exhibition, arranged by the Rev. F. G. Rogers, Vicar of Scarning, was a great success and visitors showed much appreciation of the ability and ingenuity of the lads under their leader and tutor. The members of the Club have the use of an A1, a Triumph, and an Imperial fretmachine, and each is employed in some part of the work—the planning, the making of the parts, and the actual construction—and prove apt pupils of Mr. Farrow in combining their work into an attractive and realistic layout.

CARVING pictures and statues in cwood, with only one hand is the cleverness shown by John Kershaw of Marlborough Rd., East Kirkby, Notts. He lost his left arm 15 years ago, but largely overcame his disability, and for the last ten years has been enjoying his artistic craft. During that period he has carved and painted over 200 pictures and several statues, using an ordinary table knife sharpened to a point.

The Editor

A simple working model in wood of a FIRE ENGINE ESCAPE

THIS attractive little toy can be made easily from a few pieces of thin wood. The escape ladder is on a realistic turntable and can be elevated and turned to any angle required. The complete toy measures 11in. overall and is nearly 5in. high. The wheels are $1\frac{1}{2}$ in. in diameter and $\frac{3}{8}$ in. thick, and having rounded treads, they may be painted up realistically to look like real. tyres. There is a well proportioned bonnet, and in addition to the driver's seat, there are side seats for four firemen.

The turntable stands on a base in line with the rear wheels. The turntable platform is pivoted to the base by means of a screw. Between the sides of the turntable there is a winding drum which is actuated by means of a crank on the right-hand side upright. The ladder is elevated by a cord running round the drum and extending upwards to connect with the extreme end of the ladder.

Ladder Raising

As will be seen from Fig. 1, the ladder is pivoted to the two sides of the turntable, so that when winding is commenced, the ladder is drawn down at the end and so elevated at the far end.

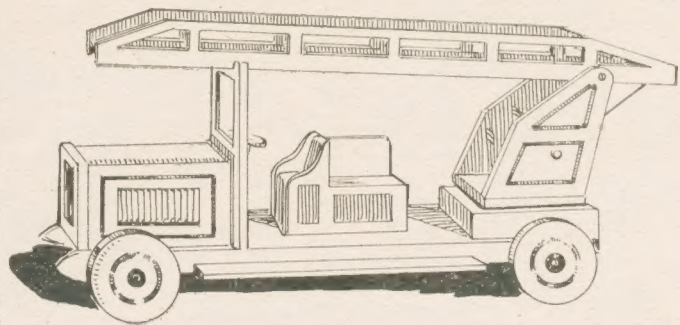
In making the toy, some pieces of

$\frac{3}{16}$ in. and $\frac{1}{8}$ in. wood will be required, and from the number of diagrams included here, together with the dimensions of the various parts, no difficulty should be experienced in making a good job of the toy.

The side view, Fig. 1, helps to show the position of the main parts of the toy. The floor (A) will be the first piece to mark out and cut with the fretsaw. This measures 9in. by $2\frac{1}{2}$ in. and is $\frac{3}{16}$ in. thick. Then to the side edges of this piece, the two parts (B) are glued and pinned.

In the detail, Fig. 2, the outline of one side is given ready for marking out. The width of this piece is $\frac{3}{8}$ in. and its length $9\frac{3}{8}$ in. There is a projecting footboard fixed to each side (B), as shown, each board being 5in. long and $\frac{1}{2}$ in. wide.

The bonnet is made of parts (C),



Picture of the model with the ladder down

(D), (E) and (F), and the sizes of nearly all these parts can be obtained from the detail, Fig. 3. It can be made complete and then glued down to the floor. Close to piece (C) stands piece (G) which forms the support for the escape ladder, and Fig. 4 gives the sizes for marking out on to $\frac{3}{16}$ in. wood.

The seats for the firemen can again be completed from the diagram, Fig. 5, wood $\frac{1}{8}$ in. thick being used here for all the parts. Note how the side edges of the top seat will be cut back to allow the sides (H) to fit under; this can be seen in Fig. 1. The width of the seat end (H) is

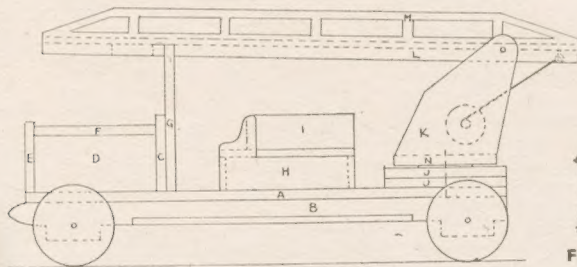


Fig. 1—Side view with lettered parts

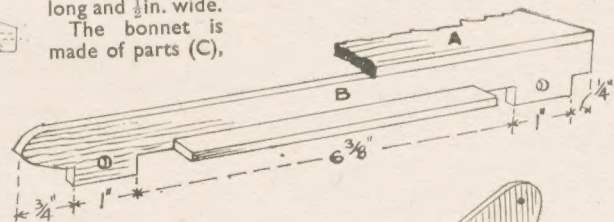


Fig. 2—Broken view of floor and side

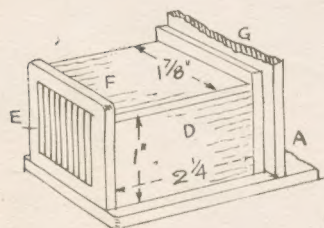


Fig. 3—Bonnet and radiator

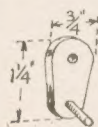


Fig. 8—Winding handle

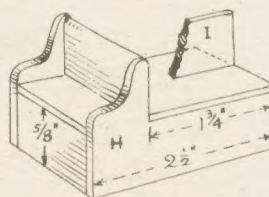


Fig. 5—Seating arrangement

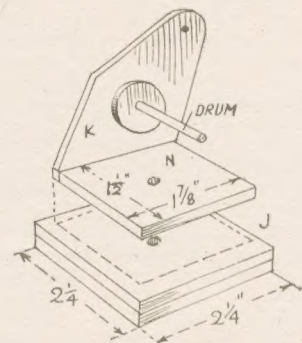


Fig. 6—Detail of drum holder

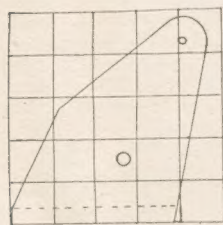


Fig. 7—Side of winding mechanism

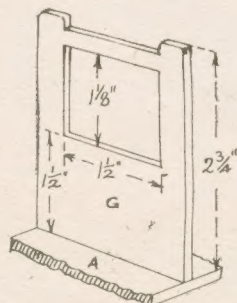


Fig. 4—Front ladder support

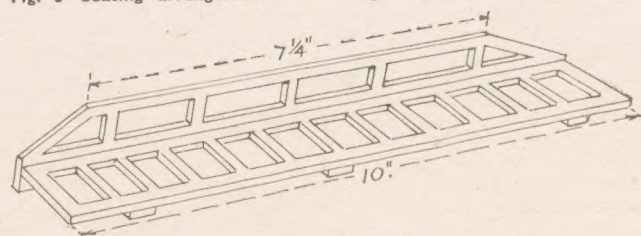


Fig. 9—Ladder, with one side removed for clarity

1½ in., while its length is 2½ in., as seen in Fig. 5.

Turntable Base

The platform or base, to carry the turntable, is made of two pieces of 3/16 in. wood glued together, their sizes being as shown in the diagram, Fig. 6. A hole must be made centrally through these pieces to take either a short length of round rod to form the pivot for the turntable, or a long round-head screw for the same purpose. If a screw is used then the head should rest upon a thin metal washer on the top of piece (N).

This piece (N) forms the floor of the turntable and to its edges the two uprights (K) are glued and pinned.

To enable the worker to get an outline of the sides (K) we have included a squared diagram (½ in. squares). All he has to do, therefore, is to draw a series of ten squares and follow the lines through them, fixing also the positions of the holes shown in Fig. 7.

Winding Drum

The winding drum consists of a piece of round rod 3/16 in. diameter and 2½ in. long, on which two discs are glued to form the ends of the drum, shown dotted in Fig. 1. These discs must fit

loosely between the sides (K) of the turntable so freedom of movement is allowed in winding. On the outside and against the side (K) a 3/16 in. washer is glued to the spindle, and then again to this is glued the crank and handle, Fig. 8, which is cut from 3/16 in. stuff.

In Fig. 6 the nearside (K) has been omitted on purpose to show the drum parts, etc.

A good idea of the ladder is shown in Fig. 9, where two of its three parts are glued together. The two uprights or sides are made from ½ in. wood measuring 10 in. long by ½ in. wide. Their outline can be drawn in from the detail shown. Mark off one side on to the wood, then pin a second piece of wood to this and cut through both simultaneously to save time and labour in cutting them separately. Clean the edges thoroughly and draw the line where the centre or ladder portion is to be fixed.

Ladder

The ladder is cut from a piece of ½ in. plywood 10 in. long by 1½ in. wide. It should not be difficult to fill in the cross steps in pencil before cutting. Glue the parts together, and to give added strength, glue underneath the ladder section one or two blocks of wood

measuring 1½ in. by 3/16 in., or, better still, some angle fillet if this can be obtained. Plain 1 in. long pieces, ½ in. square in section, would serve well in place of that suggested.

Before the ladder is pivoted to the turntable top, and the winding arrangement fitted, it would be best to put the wheels on. Long round-head screws are wanted for this and small holes should be bored in the sides (B) to receive them. It would be a good plan also to glue blocks of wood at the back so the screws get a really good hold.

Another plan for the fixing of the wheels would be to have ½ in. rod axles running right across with the wheels glued on the ends. In pivoting the ladder, first rest it on its front frame and set it in the position shown in Fig. 1 for the rear portion. Then drive the pivoting screws in so they pass freely through sides (K) and are threaded securely in the sides of the ladder.

Finally, add the winding cord which should pass over the top of the drum spindle, as Fig. 1. When the crank is in action the latter should turn forward or clockwise.

The toy should be painted up in bright red, relieved here and there with panels picked out in yellow and dark brown.

For a simple antique finish to oak you can make HOME MADE STAIN

STAINS come from many sources. Many modern kinds require expert handling, are expensive, and are solely in professional use. The cellulose-base materials may supply a good finish, but they are tricky and temperamental in use. Also—and this is their real defect—they lie on the surface and do not penetrate and any scratch shows.

Here is a simple method of wood staining, where the biggest need is plenty of time. You can use it on new wood, and also on old wooden objects that are not painted or finished with cellulose or french polish.

The preliminaries are important, the materials are cheap. You need only a pint or so of liquid creosote, a half-gallon of ordinary-paraffin, some brushes and polishing cloths, and some furniture wax.

Work on New Wood

Clean new wood is delightful to work on. See it is thoroughly dry and that all surfaces are finally finished off with glasspaper and free of dust. All nail or screw heads should be well in and covered or filed level.

Choose a suitable place to hang or stand the object before using stain, or handling will spoil both the surface and your hands. In the back garden is best, under slight cover, to allow air free access if it is dry and warm.

Pour a half-pint, or less for small objects, into a clean tin or glass vessel—

one you do not want any more. Now add some paraffin until diluted about four parts to one. This dilution varies the tint, which is a rich brown hue. Try a brushful on some underneath part. Remember you can easily make it darker, but not so easily make it lighter. Use an ordinary clean paint brush or a similar kind that does not shed bristles. Brush on the liquid and let it soak well in. This is the secret. You may have to go over some parts several times, so try to get an even tint.

Now this creosote mixture will not dry rapidly. It should not dry but soak in; and if properly done will penetrate ½ in. or ¾ in. right in. It may take two days to dry. If it drips, put old newspaper underneath.

Polishing

The other half of the job is in polishing. When reasonably dry, scrub over the surface with a bodge of old newspaper. This brings off surplus liquid and leaves a place for polish to 'take'. You

can use almost any furniture polish you can get for the first applications. The purpose is to 'body up' the grain until it comes level. Use first a hard boot-brush type to polish over this. A fine polish will develop after many applications.

This was the way in which the genuine antique polish that you see on old furniture in museums was first obtained. As a rule they polished up, once a month, with the residue of pressed linseed. They do it still like this in India, on teak, for it keeps the wood waterproof and stops shrinking. After a year, polish once monthly and you have an unsurpassable finish on your furniture. No casual scratch will show white. This stain needs no varnish and will not take paint, only polish!

Work on Old Wood

First clean down to the surface. You may need sugar-soap, but thick paint may shift only with use of solution of lye, that is, caustic soda. Do the job on the grass in the back garden; not inside unless on a stone floor. Scrub and scrub until all old paint and varnish is gone. Leave to dry thoroughly. Then proceed as for new wood. This stain will never dry on top of old paint or varnish.

Creosote will stain your clothes. So do not work in your best. Any stain should be soaked with paraffin at once; then washed. Clean your hands and brushes with paraffin first, then soap and warm water.

HOBBIES 1950 HANDBOOK

This popular work for craftsmen is now on sale. It has 80 pages full of suggestions and a free design for a model old-time ship. Newsagents and Hobbies Branches and Iron-mongers sell it for 1/- . Post copies are obtainable from Hobbies Ltd., Dereham, Norfolk for 1/2.

The second stage in the making and use of HAND PUPPETS

THE papier-mâché heads described in the preceding article will, apart from being light in weight, be quite strong; and they can be made even stronger by packing the inside of the features with plastic wood.

True, they will not stand rough usage, they are not for knockabout acts; but for general use they are excellent. They have the necessary tubular neck, for the index finger, and at the base of the neck is the flange for holding the foundation-body in position. Now they must be 'made up', like human actors, and fitted with hair.

Facial Colouring

The face painting can be done with either 'flat' oil or ordinary poster colour. The oil colour is more permanent. The flesh tints are put on over a priming coat of flat white. For flesh use Naples yellow with a little light red. Vermillion tint, used very carefully will colour the lips and cheeks. Around the eyes a pale tint of prussian blue and white will add a touch of glamour, especially to the female characters.

Eyes should be treated with care. Some puppeteers give their figures heavy, upper eyelids and paint the whole of the eye dark brown, making no attempt to copy nature. In any case the craftsman should avoid giving his faces staring eyes so that if natural eyes are

be made, also, of crêpe hair, sold at theatrical costumiers, or ordinary rug wool. The stuff is sewn on to a small linen skull-cap and then combed out, curled, and cut to the shape required.

Permanent hair can be made by gluing soft cord or rug wool directly on to the head, while it is still getting cool it can be 'set' into whatever pattern is required. Close cropped hair is made with a layer of plastic wood over the head and comb-lines made while it is soft.

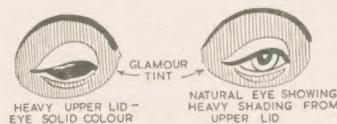


Fig. 1—Making-up the eyes

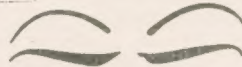


Fig. 2—Female eyebrows (top) curved and apart; man flat and heavier

If the puppet-maker is of an ingenious or inventive nature he will find many ways of making these special details.

The Hands

There are various ways of making hands for these glove puppets. They can be of carved wood or just flat things, with merely indicated thumb and fingers suggested by grooves or even painted lines. On the other hand the puppet maker may feel that carving a hand is entirely beyond his skill. In which case he can avoid the task by making the hands of some soft material such as felt or wash leather, or even cloth.

Many experienced puppet operators prefer these soft glove-like hands, for it is possible to get a suggestion of flexibility with the tips of the fingers, and to 'feel' the prop-

erties as the puppet picks them off the playboard and holds them.

Wooden hands, if well carved, are most effective, especially for serious dramatic work, but the soft material hands are 'silent' and quite suitable for general utility purposes.

At the wrist, each hand has a 'thimble', a short forearm in the shape of a finger-tube. This tube can be of felt or soft leather, and the short sleeves of the foundation body are then fixed very securely around the wrists to connect the hands with the body.

The Foundation Body

This is usually made of some dark cottony material, old 'black-out' curtains, a stuff of a similar nature. It not only

links up the vital parts of the puppet, but it forms the 'sleeve' which masks the arm of the operator. The real costume of the puppet is put on over it.

The Sleeve

In length this 'sleeve' should reach almost to the operator's elbow when the head and hands are in position for action. This length of sleeve is to allow



Fig. 3—Make and form of wigs

the arm of the operator to go well up above the playboard if necessary.

This foundation body should have just sufficient room inside to allow the operator's hand a free passage. This freedom of 'exit and entry' is very essential, because quick puppet changes constantly occur in a performance, and sometimes the operator may have his opposite arm occupied by a second figure at the moment when the change is to be made. Some puppeteers sew a thin wire ring around the bottom edge of the foundation garment, to assist in this business of saving time in the changes.

Costumes

The finishing touch to the foundation body can be either a hook or a ring. This is fixed to the bottom edge of the sleeve and serves to hang up the figure off stage. Costumes may be made interchangeable by the careful use of press studs.

The puppet is now ready for its costume. This should, in every case, be

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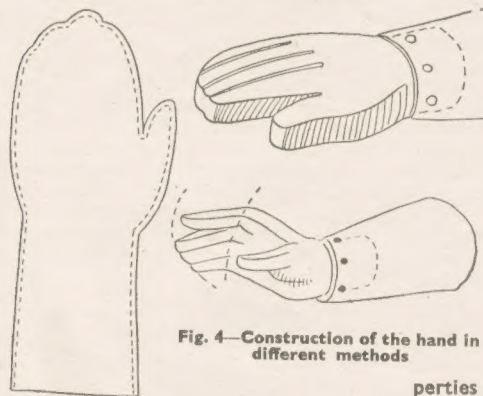


Fig. 4—Construction of the hand in different methods

put in the face a heavy shadow-line should be painted immediately below the upper eyelid.

In puppet make-up the faces are painted in conformance with an age-old theatrical tradition—the male characters with redder, darker tints, the females with pale, almost white faces, delicate rosy cheeks, and red lips. If age lines are to be painted on they should be done very carefully with pale blue-grey. Avoid crude effects; reserving all red noses and scarlet cheeks for clowns and other burlesque characters.

Wigs, which will serve useful purposes, can be bought at Doll shops. They can



Fig. 5—Costume and hanging hooks

The concluding details on how to undertake ALARM CLOCK CLEANING

ONCE the movement has been removed from the case, hands and dial should be taken off. Care must be taken here. When pulling off the hands be sure to pull straight in the direction of a line through the centre of the pinion, and to grip the hands at their centre. If any sideways pull is exerted on the centre pinion it will break. The same applies if strain is put on the hands. The dial is fixed with two steel pins. Avoid touching the dial with oily hands as fingerprints are almost impossible to erase.

Next remove the balance wheel and hairspring. To do this, pull out the pin holding the hairspring to the plate of the movement, being careful *not* to grip the hairspring as well as the pin. Then rotate the balance wheel until the hairspring is clear of the regulator. Unscrew one of the cups in which the balance is pivoted and the balance will fall out. The ends of the balance spindle or staff should be pointed and sharp.

Lathe Work

If they are worn badly no amount of cleaning the clock will make it go. Those who have a small lathe into which the balance staff can be fitted can re-grind the pivots with an oilstone, finishing off with differing grades of emery cloth until a glassy finish is obtained.

Then we come to removing the pallets. First ease the four nuts holding the movement plates together. Do not remove them altogether. Then, holding the fourth wheel with one finger, gently lift the corner of the top plate and the top pivot of the pallet staff will leave the hole. With the tweezers, lift the pallets clear and gently replace the escape wheel pivots (they are sure to have fallen out).

When this is done, press the plate back into place, let the gear train run and tighten one of the nuts to hold the train together. It is in these operations that particular care must be taken. Never use force, for everything fits into place. Pinions are hard steel and will snap easily.

Alarm Retainer

On the alarm hand spindle there will be a small spiral spring, a washer and a pin. Their purpose is simply to hold the alarm hand in the place it is set. Remove the pin and the rest can be lifted off. Unscrew the four nuts and remove them; then lift the top plate away.

All the wheels with the exception of the centre wheel will then lift clear. The centre wheel will be held by the small brass pinion which drives the hour-hand gears. It is far better to leave the centre pinion in place rather than attempt to remove the brass pinion. Take a note of where the end of

the mainspring is hooked to the plate. It will save endless trouble when re-assembling.

Wash all the parts in petrol (lighter fuel is ideal) and with a stiff brush, removing any dirt accumulated in the teeth of the pinions or wheels. Examine every tooth carefully to see there is nothing wedged between and then leave them to dry. When dried, brush them again, using a little powdered chalk on the brush to give a really clean finish.

Dirt Remover

Treat the plates in the same way and then with a piece of thin dowel rod or any other hardwood, sharpened to a point, clean out every hole in the plates. It is often necessary to repeat this two or three times until the wood comes out of the hole as clean as it goes in. In the same way clean out the cups which hold the balance wheel.

The pivots on the end of each pinion should be pressed into a cork or the open-grain end of some soft wood, to remove any dirt that may still be left on them. They should be quite clean and polished before they are re-assembled.

When everything is as clean as it can be, apply a tiny drop of oil to the centre pinion where it goes through the plate and to each of the balance cups and then begin to assemble the clock.

Spring Replacement

First hook the mainspring over its post and push the barrel into the hole in the plate. Here a little force may be needed because the spring is unwound. Next, the alarm spring is replaced in the same way and the top plate fitted over the centre pinion and the two barrel pinions. It should not be pressed down on to the posts at this stage. Now replace the third, fourth and escape wheels into their holes in the bottom plate.

Next replace the alarm escapement and gently press the top plate down. With the tweezers fit each pivot into its hole in the top plate and half screw down the plate. If the whole train runs freely when the barrel is pushed then the pivots are in the holes and the nuts can be given a turn. Screw on the winding keys and give a turn to the springs, letting the trains run to see everything is free.

Alarm Set

The spiral spring, washer and pin should be replaced on the alarm spindle and the alarm set-piece screwed on. Now when the alarm is wound, it should only operate when the hand-set piece is moved to a certain position. Replace the pallets by inserting the pivot in the bottom hole and then lifting the top plate until the top pivot can be lifted into place.

Any force here will result in breaking the two steel pallet pins which are quite hard and brittle. Then with everything nicely in place, the plate should be screwed down again just finger tight.

When the mainspring is wound now, the pallet lever should flick from side to side when it is touched and it will be easy to see how the balance wheel obtains the impulse to keep it swinging. The balance wheel should now be replaced.

First be sure the pin on the balance wheel is in the fork on the pallets, then with the bottom balance pivot in its cup, screw down the top cup making sure the other pivot goes into it. When the cups are in the right position the balance is free, but there is very little endshake.

The balance should be rotated until the hairspring can be fed through the regulator and into the post on the plate to which it is pinned. At the place where the hairspring was originally pinned there will be a kink. With this kink in the hole in the hairspring post, replace the pin, pushing it home until it is quite tight.

Oiling

Now, if the balance is given a gentle swing the clock will start ticking merrily and it can be oiled. Into each pivot hole drop just one drop of oil from the end of a piece of thin wire. The teeth of the escape wheels, both time and alarm, should be oiled; the gears which carry the hands should be oiled only where they turn on their pivots.

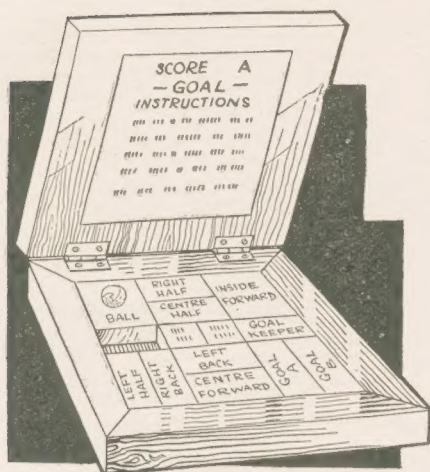
On no account should the hairspring, the pinions, teeth, the pallet fork or the pin on the balance wheel be oiled. The only use of oil in these places is to collect dust and dirt and make it necessary to clean the clock again in a few weeks. Apart from these exceptions the rule should be a minimum of oil on anything that moves.

Dial Timing

The dial can now be fixed with its pins and the alarm hand pushed home. When this hand is turned there will be a click at a certain point. Note the time on the alarm dial by this click and replace the time hands to this time. Then check that when the alarm hand is set for a certain time, the alarm rings when the time hands are set to that time. Slight adjustments may be needed.

The inside of the case should be given a brush out to remove any dust that could collect in the movement and the inside of the glass given a rub over and then the clock can be replaced. If the rules on cleaning and, particularly, oiling have been carried out there is no reason why the clock should not give good service for another two years before it wants cleaning again.

Amuse yourself by making and solving this novel FOOTBALL PUZZLE



HERE is a novel topical little puzzle for those who like these interesting designs, and although simple to make, it is quite a knotty problem to solve. It will pass the time well and you can always try it on your friends. Just show them once and leave them to it. You will have great fun watching them get it into a hopeless muddle.

The puzzle consists of a shallow wooden box in which loose blocks can be slipped one at a time with the finger tip into new positions. The game is to get the 'ball' by these movements, into the goal. The ball has to move through the field, outwitting or dribbling past the various players, being subjected to throw-ins, corners, etc., and eventually arriving in the goal itself. In other words the top left corner-block must be transferred to the bottom right-hand corner (see Fig. 1).

To do this takes far more movements than would at first seem necessary; and even when you have found a solution, further fun can be got from the puzzle by trying to reduce the number of moves required to effect the change.

Constructing the Box

Now as to details of construction; the box has a base of $\frac{3}{4}$ in. material, $3\frac{1}{2}$ in. by 4in. Along the sides are four pieces, $\frac{3}{4}$ in. thick and $\frac{1}{2}$ in. wide, mitred at the corners, as shown in Fig. 1. These are held in place by fret-pins and glue. Get the corners as tight as possible as this adds to the neat appearance of the finished puzzle.

When the glue has dried thoroughly, smooth off the outer edges with a glasspaper block or by placing a sheet of glasspaper on a perfectly flat surface and rubbing the edges carefully along this.

Having cut the lid to size, $3\frac{1}{2}$ in. by 4in., from $\frac{3}{4}$ in. wood, cut in the recess for each hinge and hold the lid in its open position against the box. Mark off

the hinge positions on the box and cut similar recesses just deep enough to take the hinge. The recess, and hinge which should be of the small brass type, are shown in Fig. 2.

It would be possible to fit small hinges made of tape and glued in place, but these would be inclined to pull away in time. Screw the hinges in place and complete the case by fitting a small fastener, as indicated in Fig. 3, rotating on to a small pin in the lid. The fastener can be bought, or carefully fashioned out of a small rectangle of brass.

The Sliding Blocks

Now prepare the sliding blocks. Take a piece of $\frac{3}{4}$ in. wood, 3in. by $2\frac{1}{2}$ in., and give it a good clean up with glasspaper. Then divide it along its 3in. side by two fine pencil lines at the inch positions. Mark the $2\frac{1}{2}$ in. side at an inch from either end, which will leave a strip $\frac{1}{2}$ in. wide in the centre. From these points mark lines at right angles across the rectangle to the further edge, as shown in Fig. 1.

Finally divide the middle top square and the lower middle square, by horizontal lines and the lower end squares by vertical lines. Complete the divisions with a vertical line down the centre of

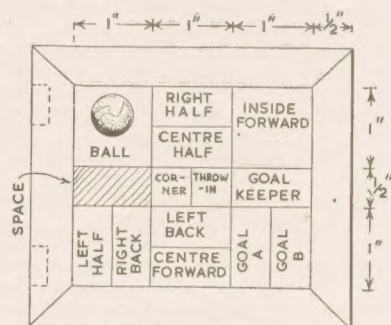


Fig. 1—Layout of the box

the middle strip. Thus the whole rectangle is divided by pencil lines into sections, either 1in. square or 1in. by $\frac{1}{2}$ in., with the exception of the middle pieces which are $\frac{1}{2}$ in. square. Note that the extreme left middle section is discarded.

Lettering the Blocks

Apply two coats of polish and give a light rubbing with fine glasspaper. This will fill the grain and stop the indian ink from running. With an ordinary pen and black indian ink, print in the titles carefully. When dry you can give another coat of polish and a final coat of varnish. The varnish will fix the ink and the blocks can be washed when they become grubby from fingering.

Make sure before you start polishing, that the pieces are all interchangeable with other pieces of the same shape, while any two half sections should make up the space occupied by any whole section. The blocks should all slide easily from one position to the next, so if they are tight before polishing, they will undoubtedly be too tight to slide afterwards.

Finishing

Stain the completed box to a fairly dark tone and give two coats of brush polish. Lightly glasspaper, and then give a final coat of brush polish and one of clear varnish. Securely glue on the inside of the lid a square of good quality notepaper with instructions telling the player what he has to do. Something like this—SCORE A GOAL. The puzzle consists of getting the BALL, the top left-hand square, to the bottom right-hand corner THE GOAL, by sliding the sections about in the box. No section must be lifted out.

Neatly written (or printed) in indian ink or, indeed, typed, the square of paper will look quite attractive. On the



Fig. 3—Hinging detail

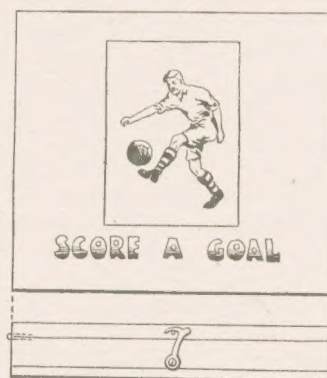


Fig. 2—Lid and side view

outside of the lid paste or glue a similar piece of paper on which has been drawn a picture of a footballer.

Alternatively this could be a photograph of your favourite player. Any suitable picture cut from a sporting magazine will do. The words SCORE A GOAL should be painted on in white enamel, which will stand out well against the dark stained background.

The Solution

The game is now complete and you will have considerable enjoyment working it out. Just in case you cannot do it, we append a solution. This, however, is not necessarily the least number of moves in which it can be done, and we

(Continued foot of page 24)

A Craftsman's Notebook

Bill the Barbet

THE article on an outdoor aviary a short time ago reminded me of some foreign birds kept in the garden before the war. All were unusual and interesting, but one in particular was different. This was a Great Billed Barbet we called Bill.

With slightly ruffled green plumage, big thick beak, and whiskers, a first impression was that the real 'tough guy' of the aviary had arrived. As though to prove this he would utter a curious sort of barking noise, and as an occasional sideline to regular soft food relished a morsel of lean raw steak which he would swallow like a pill. Of African origin, he was about the size of a thrush.

Despite that somewhat unusual appearance Bill revealed a sociable nature, readily accepting raspberries and similar offerings from one's fingers, and responding to his name with a long series of the funny friendly little barks. When war conditions led to the rest of the aviary being disposed of, Bill was provided with a large cage and kept in the house.

After a period of coaching, on being told to 'go to bed' he would hop into the separate little compartment reserved for sleeping, then turn about and settle down for the night with head just showing in the opening. He preferred a plain bedroom, for if a little hay were put in this special box with a view to making it more comfortable Bill promptly and noisily ejected every bit of it.

Sketching Made Easier

AT one time or another many of us attempt sketching but unless accomplished in this direction give it up after one or two rough efforts with pencil and paper. If a snapshot of the subject is available, however, even an amateur artist can produce a fair drawing.

The print should preferably be on a matt surface paper, fixed, washed, and dried in the usual way. The various features of the scene are then drawn on the photograph with indian ink. When the ink is dry the print is immersed in a solution of the 'reducer' used for photographic purposes, chemicals for

which are available from dealers. This will bleach away the photographic image, leaving only the ink sketch on a white background. Finally, wash and dry the paper.

A few such drawings add novelty to the picture album, and larger prints would also look distinctive if framed for wall decoration.

Swallows Away

MORE than usual activity in the air nearly one September morning drew me to the window of a country cottage where I was staying. I saw the reason. On nearby telegraph wires swallows were assembling, three or four long rows of them. New arrivals were continually lining up, a few seemed rather restless making quick short flights here and there, but the majority were patient—ready and waiting.

In some way known only to themselves word had gone round that the time to be off was near, and this was the chosen meeting place. Next time I looked the order to start had been given, for the birds were in the air. On route, no doubt, they would be joined by flights from other districts, and a month or so hence they may be as far away as South Africa.

Even taking instinct into account it is impossible to realize how all those birds should decide at the same time to meet in a certain place on a certain day. Bird-watchers studying the mysteries of migration will note their progress. Watching them, I myself wondered whether those stragglers were merely slow on the wing or occupying appointed rearguard positions for some special reason.

As the specks receded I realized, although I was lucky to witness this start of a strange journey, it meant summer was also leaving us—until the swallows return in April.

A Key Tip

A GOOD idea is to make use of colours as a quick means of identification or check on the contents of cans, bottles, and other containers if the ordinary label gets obliterated. I came

across an example of the way this helps in connexion with keys. On a bunch, some of them, particularly those of the Yale type, look so similar that several have to be tried before finding the right one.

Time can be saved by marking each key with a separate colour—say, by means of paint or coloured cotton—and the corresponding keyhole with a spot of paint or chalk to match. Large keys not carried on the person are often attached to a cotton reel. A coat of bright paint on the reel would make it more easy to find if left lying about away from its usual hook.

Art of the Potter

FASCINATING to watch is the Potter, between whose hands a ball of prepared clay on a revolving wheel is transformed into a tall vase or fat bowl or plant pot. With fingers and thumbs, and, perhaps, a few simple tools for special touches, he hollows it out and guides it to shape, then separates it from the wheel with a strand of wire and puts it aside for other experts to decorate and finish off.

Interested onlookers have probably gathered around a Thrower—as the craftsman at the wheel is called—during many a century, for pottery is one of the oldest crafts. Excavated specimens reveal that thousands of years ago people all over the world fashioned primitive clay vessels for carrying water from the streams.

In this country the art began to make real progress from the 17th century. Being well-situated for the necessary materials, a great industry developed in the Staffordshire district known as The Potteries, and it was here that about the year 1680 a new method called Salt Glazing began to be used.

Other districts also engaged in the trade produced distinctive styles of ware, some pottery bears the characteristics of a certain period, individual craftsmen gained lasting fame for their skill, so now among connoisseurs in search of the rare and beautiful we hear reference to Worcester, Crown Derby, Minton, Chelsea, Spode, Wedgwood, Doulton, Dresden, and other famous wares.

The Craftsman

Football Puzzle—(continued from page 23)

expect you will soon find a way of cutting down the total considerably.

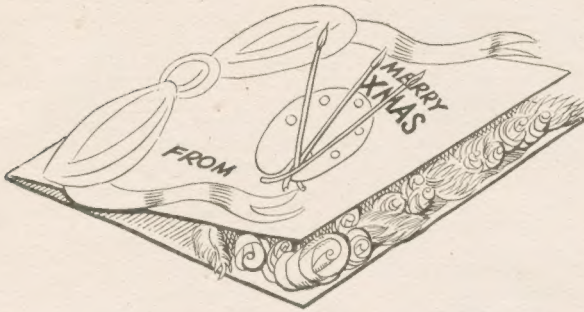
The letters (U), (D), (L) and (R) mean up, down, left and right respectively, while the other letters are the initials of the block title, for example B is ball and GK is goalkeeper. Bearing this in mind make the moves as follows.

B(D), RH(L), CH(U), C(U), C(R), B(R), LH(U), RB(L), LB(L), CF(L),

TI(D), C(D), B(R), LH(R), RB(U), LB(L), CF(L), C(L), TI(U), CF(R), LB(D), C(L), TI(L), B(D), CH(D), RH(R), RB(U), LH(U), C(U), TI(U), LB(U), CF(L), B(D), TI(R), C(R), RB(D), LH(D), RH(L), CH(U), C(U), TI(U), GK(L), IF(D), CH(R), RH(R), RB(U), LH(U), GK(L), TI(D), TI(L), IF(L), GB(U), GA(R), B(R), TI(D), C(D), IF(L), GB(L), GA(U), B(R).

It would also be interesting to get the ball back from the bottom corner, to its original position. If anything this is harder than scoring the goal, but have a try at it. For those who are interested in other games it will be easy to substitute the various positions, etc., of their own particular game for those of the footballers. In any case it provides a fascinating and interesting puzzle to undertake,

There is interest and novelty in making sculpture type GREETING CARDS



THIS card looks attractive 'and novel, and although it appears most complicated and expensive when assembled, it is really quite easy to make and will only cost you a few coppers. The greeting you put on the card is entirely a matter of taste, so we need say no more about that part in the instructions which follow.

The illustration above is a drawing to show you what the card should look like when completed, but you can alter the design to suit either yourself or the person to whom you are sending it. For instance, if you are sending it to a pal who is very keen on football you could easily replace the artist's palette with a soccer ball, and so on.

One word about packing. If you send this card by post be sure to put it in a stiff cardboard box to prevent it being crushed. The whole thing is extremely delicate, and the slightest blow may quite easily ruin it.

Preparing the Cards

The card can be of any size, provided you bear in mind the proportions as shown. A convenient size to work, however, is 8in. by 5in. and all the measurements given are for a card of that size.

The first thing to be made is the foundation card measuring 10in. by 8in. folded in two to measure 5in. by 8in. This is cut to the required size, and then the top card is cut $\frac{1}{2}$ in. narrower than the foundation card (namely 8in. by 4 $\frac{1}{2}$ in.). Both cards should be white.

The shapes shown in Fig. 1 should be cut out of white cartridge paper, and the dotted lines drawn lightly in pencil on the underside of the paper. The lines indicated by dashes should be drawn on top of the paper. These pencil lines should now be scored with a penknife or some other

instrument that is not too sharp.

By pressing on the dotted lines a V-shaped fold will now be formed by each set of three lines, and part (B) will fold under (C) whilst (D) is merely folded down. The two parts at (A) form the ends of the bow. After part (E) Fig. 1 has been cut out and folded, this forms the centre of the bow and gives the twist effect by pasting (C) and (B) on the underside of (E) after passing through the arch. Thus all parts now form one complete piece.

The shapes shown in Fig. 2 are cut out of cartridge paper and can be given delicate curves by drawing the strips between the thumb and blade of a penknife or scissors, as shown in Fig. 3.

The Palette and the Brushes

The palette should be simply cut out of white cartridge paper, as shown in Fig. 4 and mounted on the small support which is made by folding along the dotted lines shown in the detail in Fig. 7 and gumming together.

The brushes are made by cutting out a piece of cartridge paper 1 $\frac{1}{2}$ in. wide and 4in. long and rolling around a knitting

needle (preferably a steel one) until it has a diameter of about $\frac{3}{16}$ in. It should then be gummed, and the needle withdrawn. When dry, the ends should be trimmed to a tapering point. Three brushes should be made in this fashion.

The Ferns and Flowers

The ferns are made by cutting out the shape shown in Fig. 5A and cutting the edges. These frayed edges can then be folded over to form a graceful curve by the method shown in Fig. 5B. The number of ferns made depends on you, but four or five should be sufficient.

The flowers are made as shown in two details in Fig. 6. Draw the spiral (A) on a piece of paper and cut it out. Then roll it as shown already in Fig. 3 and the result is shown in Fig. 6B. The inside of the flowers should be given an extra roll with the fingers to add a more realistic effect. As with the ferns, the number of flowers made depends on you, but a dozen should be sufficient. By varying the shape and size of the spiral in Fig. 6A all sorts of different flowers may be obtained.

Colouring the Card

If you so desire, the card can be left completely white, for being quite delicate it looks very effective if left without colour. If, however, you do decide to use colour do not overdo it! Poster colours sprayed on by means of a tooth-brush or stencil-brush are the best, but if these are not available a thick water-colour wash will do just as well.

It is important to treat all the parts with colour before mounting as this gives a better finish to the card. You (Continued foot of page 28)

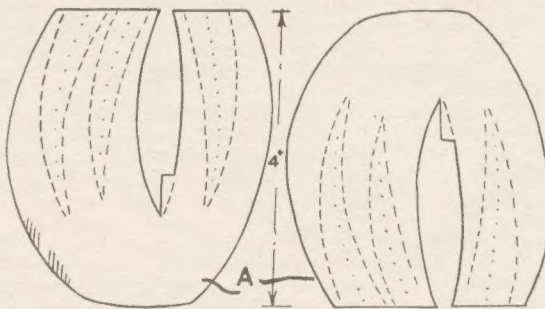


Fig. 1—First shapes cut out in card

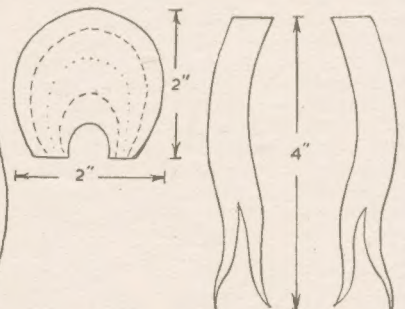


Fig. 2—Pennant strips



Fig. 3—Curling the strips



Fig. 4—Palette shape



Fig. 5—The fern fronds



Fig. 6—Forming the flower shapes

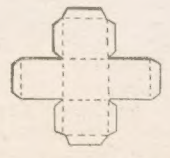


Fig. 7—The support shape

It will pay the handyman to remember these points about BRUSH ECONOMY

WHEN selecting paint brushes always give a thought to the jobs that have to be done; do not haphazardly buy brushes only by the size required, the right type of brush plays a big part towards completing a neat and satisfactory appearance.

It is handy to have a dusting brush for cleaning off woodwork after sandpapering and it should have bristles about 4in. in length and flexible, bend the bristles back and see if they return to their former position and shape, this is a good test for flexibility.

When buying brushes do not be tempted into buying cheap ones because they look all right. If you do, you will find that in the majority of cases they will leave brushmarks. This is caused by there not being sufficient thickness of hair to hold the paint and consequently the paint is spread unevenly over the bristles.

Suitable Sizes

For the amateur painter about the house, flat brushes are the most useful. A set of three— $\frac{1}{2}$ in., 1in. and 2in.—will be adequate for most purposes. The bristles should be springy and reasonably stiff.

For enamelling special brushes should be used, similar to the flat brushes used for painting, except that the bristles are somewhat shorter and stiffer and levelled off at the ends. That is to say they are 'worn in' from the start and do not leave deep brushmarks. Two such brushes—1in. and 2in.—will suffice.

For Varnish

Varnish brushes are much the same as enamel brushes, having bevelled ends to the bristles also. The best ones have white bristles which are very springy and stiff. Varnish brushes should last years provided they are looked after properly, and it should be realized that they improve with age and careful use. Only two brushes are needed—1in. and 2in.

Contrary to other types of brushes, the best distemper brushes are often the cheapest, the flat type, being the best for the handyman about the house because they are less liable to splash. The handiest width is about 7in.

Care

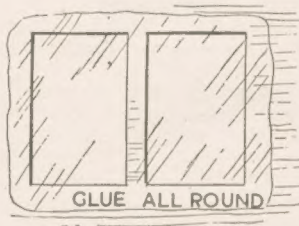
Why is it that so many people incur

extra expense every year on buying new brushes, when with a little care their brushes will last many years, and paint better for their age? Do not wash out your brushes in soap and water as it is quite impossible to remove all the paint, and when subsequently used will often leave brushmarks.

By far the best way to store paint brushes is in water. Rig up a wooden box with a deep metal tray in the bottom and fill this tray with water. Bore holes through the handles of the brushes and suspend them into the water with the wire threaded through the handles.

Cellophane for Windows

HERE is a suggestion for making suitable windows for doll's house or any building requiring them. Cheap and realistic windows can be made as follows. Put glue round the frame inside, dampen a piece of



Cellophane or similar transparent material and stick on. This will dry out tight and look just like glass.

See the water covers the bristles, and do not let the brushes rest on the bottom or the bristles will become distorted in time. Before putting them into water rub out as much paint as possible on an old piece of wood and wipe over with a rag soaked in turpentine. Brushes kept in this manner are in good condition and always ready for use.

Enamelling

Enamel brushes may also be kept in a similar manner providing they are well cleaned with turpentine, shaken out, and rinsed through with linseed oil

first. But the best method is to suspend them in solution of half turpentine and half linseed oil. It is inadvisable to store any brushes in pure turpentine as it forms a gummy mass in the bristles and spoils them.

Varnish brushes should also be suspended in a solution of half turpentine and half linseed oil, and care should be taken that they are kept free from dust and grit. When using a varnish brush do not take it straight out of the solution and commence varnishing as the varnish will be soft and a long time drying.

First pour some varnish into a pot and, having scraped out as much of the solution as possible, work the brush well into the varnish. This varnish should not be used, but may be poured into the solution to assist in keeping the brushes in good condition.

Distemper Brushes

Distemper brushes after use should be rinsed through with clean cold water, washed with warm soapy water thoroughly, rinsed through once more with cold and hung up to dry with the bristles downwards. When not in use they should be hung by the handles in a cool dry place. With these brushes warm soapy water will not harm, and distemper, being a very different texture from paint, can be washed out fairly easily.

New Brush Treatment

New brushes should never be used for finishing coats if they can be avoided as even the best ones leave slight brushmarks and a few bristles are almost certain to come out. By using them for rough work first they become worn and very suitable for final coats. If the new brushes are not to be used for some time they should be kept in their original wrappings. If not wrapped, cover the bristles with greaseproof paper for protection from moths and dirt. Always work out new brushes on the palm of the hand before using to remove dust and loose hairs.

Provided dusting brushes are not left standing on their bristles, causing loss of shape and twisting, no special care is needed.

Looking after brushes in this manner may mean a little extra work. But why waste hard-earned money unnecessarily each year?

Puppets—(Continued from page 21)

knock and cheerful in colour, and if for a knockout comedian, of very strong material. The average life of a suit for Mr. Punch is of very short duration, especially if he happens to be having a busy time.

Incidentally, in the English Punch show, only one figure has legs; that energetic and murderous old rogue Mr. Punch. In some continental shows, however, all

the puppets have legs which hang in front of the foundation body.

If the puppeteer decides to follow tradition by making a set of figures for a Punch show he will need, in addition to the main pair of characters and the baby, a representative of the law (usually a Beadle) or policeman, Jack Ketch, the hangman, and a 'Joey', the clown, who is

the only character in the play to outwit Punch.

Apart from a Punch troupe a very useful set of figures could represent characters of everyday life—a family group, old and young people, policeman, postman, neighbours. Others could be added as required, but with a troupe like this an endless variety of plays and sketches can be performed.



The Universal Postal Union

ON 10th October appeared sets of stamps from 64 of the Crown Colonies. Each issued a set of four stamps making 256 new British Colonials to put into the album. Thank goodness this issue is not to be like the Silver Wedding issue. The values are to be kept in line with postal rates. That is, one stamp will be the rate for inland postage, a second for foreign and the other two will cover the rates for airmail. While the face value of the Silver Wedding stamps was in the region of £50 the new set will come between £6 and £7.

Foundation Celebration

The occasion (10th October) is the 75th anniversary of the foundation of the Universal Postal Union. Other countries are going to celebrate this anniversary as well. In fact Czechoslovakia has already done so with an issue of three stamps.

The designs of these stamps contrast the methods of today with those of 75 years ago, each stamp is divided in two by a column bearing the letters 'U.P.U.' One has a mail coach and a train, the second a courier on horse and a motor mail coach, the third shows a sailing ship in rough water and an aeroplane.

Have you ever stopped to think what this Postal Union means to you as a stamp collector? And, far more important still, what it means so far as the conveyance of mails all over the world? In the early days of the nineteenth century the rates of postage from one place to another was chaotic.

A Costly Business

The writer has a letter sent from India in 1832 which cost 6s. 8d. and took six months to do the journey. This was not a bulky letter—just the size of a business communication. Also, remember that 6s. 8d. in those days meant very much more than it does today.

Before the Universal Postal Union each country had to make separate arrangements with its neighbour for letters to pass from one to the other. Rates of postage had to be worked out for each case and there would be quite a big calculation if the letter had to pass through one country on its way to another.

It was in 1836 that a start was made. Then it was agreed that a charge of 1s. 0d. per oz. should be made for a letter from the Mother Country to any port in the British Colonies. But note that it was to any port, for on top of that there was the charge to the interior.

About 1853 this rate was reduced to 6d. per oz., except to The Cape of Good Hope, India, Mauritius, and Tasmania and

it was not until a year later that the cheaper rate applied to these places.

It was 75 years ago, namely in 1874, that the Universal Postal Union was formed. In 1863 delegates from most of the great powers had met in congress at Paris and recommended various improvements in the International Postal arrangement. These recommendations formed the basis of the treaty signed at Berne in 1874 when the delegates of twenty-two of the countries formed the Postal Union.

Another Congress took place at Paris in 1878 and another at Lisbon in 1885, and provision was then made for meeting every five years. It is usual for the country acting as host for the Congress to issue a set of stamps in commemoration of the meeting and in 1929 Great Britain issued a set of five stamps, ½d., 1d., 1½d., 2½d. and £1. The first value of this set is illustrated here.

Early Entrants

Although the Union was formed in 1874 it does not mean that every country joined on that date, by any means. The majority of the British Colonies joined about 1877, but some of them were much later—The British Solomon Islands for example did not come in

some of the postal clerks know when they are sorting the letters.

General Colour Scheme

Now, if they do not know the country of origin and neither do they know the currency, how can they know if the right postage has been paid or if they have to stick a postage-due stamp on and thus collect a fee? Well, the International Colour scheme has solved the problem. Although they may not know anything else about the letter, seeing the colour tells them that the postage value has or has not been paid.

It is only natural that such an event would attract attention and the issue of special stamps, just as the anniversary of the opening of postal facilities in any country does. China for example in 1936 had four stamps to commemorate the 40th anniversary of the Chinese postal service, showing pictures such as different ways of postal communications, the G.P.O. at Shanghai.

Then a few years ago we had the stamps to commemorate the introduction of penny postage stamp, and, as you are aware, these showed portraits of Rowland Hill.



Fig. 1—A British Stamp of 1929



Fig. 2—The Imperial Penny Post

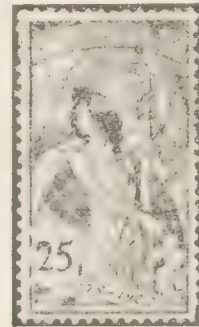


Fig. 3 After 25 years

until 1911—at the same time as the Gilbert and Ellice Islands.

The Imperial Penny Postage was introduced at Christmas, 1898, and this was commemorated by the map stamp from Canada, the 2 cent value with the words 'We hold a vaster Empire than has been'. This is a stamp which we illustrate. The Australian Colonies were still outside the Union and the postage rate there was 2½d. per half oz.

At the same time as the Imperial Penny Post was introduced, the Colonial Colour Scheme came into being when it was agreed internationally that stamps of approximately ½d. in value should be green, the 1d. red, and the 2½d. blue. Universal colours were drawn up in 1907.

The advantage of this is considerable. Some collectors are not too sure from what country a particular stamp comes. In fact all of us have gone through the stage of learning, and still less would

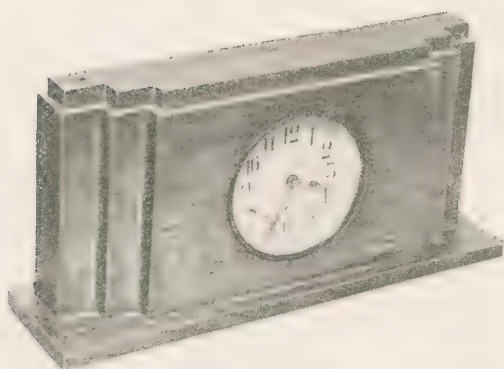
A set of three Pakistan memorial stamps appeared on 11th September, the first anniversary of the death of—to give him his full title—Quaid-i-Azam Mohammad Ali Jinnah—who died of heart failure.

Most of the memorial stamps bear the portrait of the deceased, but in this case it is the Islamic tradition that no portrait will be shown; instead, the watch words 'Unity, Faith, Discipline'.

The two lower denominations 1½ annas and 3 annas, dark brown and dark green respectively, have these words printed in Urdu which is a variety of the Hindustani Language, the language of Mohammedan India. The third, 10 annas in value and black in colour, has the same printed in English.

The stamps, designed by the Ministry of Communications in consultation with the department of Advertising, Films and Publications, have been printed by Messrs. Thomas De La Rue & Co.

Provide your cheap tin clock with this MODERN CLOCK CASE



A FEW pieces of hardwood suitably fashioned can be used to convert an ordinary tin clock into a smart modern timepiece fit for any drawing room. Almost any tin clock which does not have an alarm bell to its top can be converted. Even a bell-topped alarm can be used if the owner does not mind doing without its services.

The idea is to remove from the clock all the bits that project, such as the legs or tin base. The timepiece is thus a smooth cylinder that can be fitted into a holed wooden frame, as illustrated.

The Wood Needed

The design supplied here is not difficult to make up. Only three pieces of oak or other hardwood are required, the sizes of which are: base, 13in. by 3½in. by ½in.; body, 12in. by 5½in. by 2½in.; and top, 11½in. by 2in. by ½in. No work is necessary on the base, once it is sawn and planed to size, other than sinking four holes for the screws which will attach it to the body.

The most important thing about the body is the hole for the clock. A number of tin clocks are 4in. in diameter, like the one illustrated, so for practical purposes we will work to that size.

The diameter needed is that of the body of the clock. If the outer rim of the clock face is a metal surround which juts

slightly, so much the better, for this will cover any imperfections in the finished circle. The depth of a 4in. clock is not likely to exceed 2½in., but if it does, the back will only stick out a bit and will not spoil the finished article.

Having chosen the clock and removed the legs and other accessories, now find the centre of the wooden block by drawing lines diagonally from corner to corner. Then set your compass to 2in. and draw the 4in. diameter circle. Bore

the circle out by whatever methods most suit your toolkit. For the clock illustrated, the hole was cut by going once round the circle with a 1in. bit, then knocking the centre out and carefully chiselling away the inevitable residue (see Fig. 1).

In the final stages of trimming, make the hole slightly larger than 4in. diameter so the clock fits easily but firmly when pushed in from the front.

Having shaped the hole, tackle the front two ends of the body, cutting with a saw to the dimensions seen in Fig. 2. This produces the striking column effect, the modern note. The back, of course, is left plain.

The Top

The top, comparatively, is simple. Mark it out and saw as for the body, but note that the overall length and breadth are ½in. less than the body (see Fig. 3). The top will thus be set back from the body, when fixed, by ½in. all round. The setting back of the top greatly improves the modernistic appearance of the finished clock and gives a pleasing artistic effect.

When all is ready, fix the base to the body with screws at opposite corners, and the top to the body with ½in. flat-headed nails or pins. The clock should slip firmly into the hole from the front. If it is too tight, and it is ever necessary to remove the works for repairs, the wood might be damaged through the use of force.

A few final tips. If you want to use the existing design but your clock is more than 4in. diameter, the design 'balance' will be disturbed unless the measurements of the wood are increased. A suitable rule is to increase the overall measurements of base, body, and top, by ½in. for each ½in. by which the clock exceeds 4in.

Naturally, it is possible to work out one's own design, using the present example as a guide. You might like to try mounting a clock in a 9in. by 6in. by 3in. body vertically on a large base. But

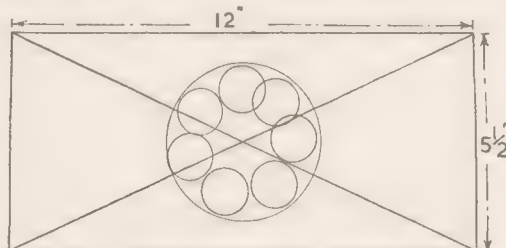


Fig. 1—The body, with details of cutting 4½in. hole

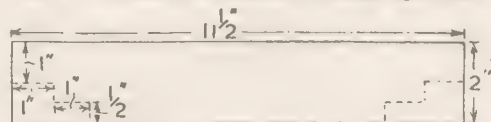


Fig. 2 Top view showing corner saw cuts

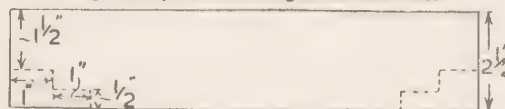


Fig. 3—The smaller piece on top

make a scale drawing first to ensure you get the 'balance' right.

Greeting Cards—(continued from page 25)

can, of course, use your own colour scheme, but here is one that can be recommended. Boards—left white; bow—pink, fading to white at the ends; flowers—pink and bright green; ferns—green mixed with a spot of brown; palette—light grey, covered with bright spots of different coloured paint around the edges; and brushes—white with black tops.

It is important that all the parts are fixed to the top card and all flowers, etc., are fixed to the bottom card before the two are joined together.

Strong glue should not be used, cold water paste, or something of similar strength is sufficient.

This is how the various parts are assembled:—

The parts of Fig. 1 are now one and the centre piece of the bow should be gummed down with its ends hidden under.

One pennant piece in Fig. 2 is now gummed under Fig. 1A and the other pennant under the reverse end. Then the whole thing is gummed down at the areas marked (G). You will find it most useful to have a supply of pins at hand while gumming to hold the various parts in position. If there is very little lettering on the card the bow may be decorated with a little fern.

The palette is glued on to the support

(Fig. 4) which in turn is glued on to the top card in a suitable position. The brushes are gummed down by folding over and pressing flat about ½in. of their ends, as shown in the first illustration. The flowers are gummed along the outside edge of the foundation card according to your own taste.

These are now fixed together by means of a paper hinge cut from cartridge paper which can either overlap about 1in. on both cards, or can cover the whole of the surface. The latter method has to be adopted if white cardboard is not used. The two cards are then held about 1½in. apart by means of a support, and your card is complete.

A practical suggestion for making and exhibiting UNUSUAL MODELS

DURING the course of a year the author goes to many Model Exhibitions and always feels that so few of us get on to something fresh in the way of models. Our craft of model-making is very creative and yet we still see such a large array of all one type of model. It would be a good plan for the promoters of Exhibitions to give a prize for the most unusual model. Give ample notice before your show, as these ideas cannot be developed and made overnight. In this article we give some suggestions, but on looking round the ardent builder will be able to find other equally good topics.

The Discovery

Illustrated in this article is a model of the Royal Research Ship *Discovery* which is now anchored in the Thames as a Sea Scout Training ship. This very fine model was made to serve as a show-piece in the foyer of over 20 cinemas showing the film *Scott of the Antarctic*. John Mills, who takes the lead, has shown great interest in this and it is now being used to collect money for the Soldiers', Sailors' and Air Forces Fund.

The boat, in itself would not have been a great attraction, but it was set in a tray 18in. deep and 3ft. 6in. long with an imitation sea made from putty. Careful

study of the pictures enabled the sea to be covered with small realistic ice floes. The sides and back then rose to look like real snow and ice drifts with Mount Erebus in the background. This was done with papier mâché, sloppy plaster and painted in white, with imitation snow, which we use at Christmas, added.

The whole scene was set in dark blue tissue and the lighting arranged in white, off-white and pale green. This was just a simple scene, which was far better than a boat, splendid as it was, standing on a stand.

Buildings and Books

From this we can go to a whole list of suggestions which may be carried out by getting permission to go round places. You will find that people will let you look round if you ask in a polite way. If you mention that you are thinking of making a model of the building or article, then they will, as a rule be most



Photo by G. W. Williams, Ramsden Heath
A display in conjunction with local cinema features

helpful. On any odd subject you must also think of suitable books in which you may get all the drawings you want.

You may start off from your home. Perhaps you have a brickworks in your district. How about making part of that? The buildings are most interesting and the piles of bricks can be made in Pyruma cement. If you put this in an exhibition you can be sure that it will be the only one of its type. Do not forget all the small vehicles one would find on this.

Haulage Vehicles

If you live in a large town you may have a heavy haulage firm with their own garage. It is surprising how many types of vehicles there are in this class, including some of those with, perhaps, 32 wheels. A book you can study for this is on sale at most bookstalls and known as *Commercial Vehicles*. By the way, firms advertising in these pages will willingly send you pictures if you send a stamped addressed envelope.

One of the greatest sources of attraction at an exhibition for which the author was responsible was the showing of models of old buildings in the town and also of those now derelict or completely demolished. This was achieved by the study of old prints, pictures and records. One must approach old inhabitants for this sort of thing and they are always willing to assist.

Windmills

Some of the best shows have been of two old windmills and some of the cottages taken down over 50 years ago. At a recent show two of these models were purchased for the County Museum. If you try this sort of exhibit, have a 'Do-You-Remember?' stand.

We see in model form many churches and similar buildings, yet few seem to

A Reader's Fine Pictures in Wood

PICTURES made in wood may sound a strange thing to many of our younger readers, but that it can be done is shown in the photograph. As you may imagine the picture was taken before the war when wood of all varieties and in all thicknesses was so easily obtainable, and we could publish designs so any fretsaw user could make these novel and attractive displays. Happy days! The actual wood was but 1/16in. thick, and by pinning four kinds together with the design on top and cutting them at one operation, we were able to complete very effective pictures with the contrasting colours of the wood. Many readers went in for this specialized wood, and found it attractive and enjoyable. Mr. Walter



White of Humber Rd., Blackheath, S.E.3 was one of them and he greatly regrets, as we all do, being unable to obtain the varieties of beautiful wood now. But Mr. White has been generous and able to help others who still can get the wood. For as a result of an advertisement in these pages sometime ago, Mr. Stuart G. Sly of Buenos Aires got in touch with Mr. White and bought some of these early designs from him. So you see, with a little thought for helping others, and a keenness in keeping back designs, one can very often provide pleasure in a totally unexpected quarter. The other picture here is of Mr. White taken some years ago with the Hobbies Royal Fretsaw—a machine manufactured many years ago and now, of course, superseded by the modern A1 and Gem.



think of building a model of their own residence. In many cases this would be of great local interest as few buildings of this type are alike.

You can find plenty of variety, especially if you complete part of the garden as well. In an exhibition, this class alone would bring in many entrants. In one area it has been tried twice, and also raises plenty of discussion.

Docks Lay-out

Another section which is very interesting and could be built up in the winter evenings to make a series would be the building of the various vehicles used at the docks. These are most varied and suited to all types of job. Here again one should pay great attention to the loads on such vehicles. It is the tiny details that make all the difference and which bring forth the praise of the visitors.

It is often the odd vehicles in a series which catch the eye. Nearly all Services

have these. There is the overhead cable repair motor of the Tramway service, the super type breakdown lorry of the Garage service, the heavy repair and towing lorry of the Bus Company. All these are definitely different, and if grouped with a descriptive card are bound to put you in the forefront as a model-maker of unusual ability and style.

The Half-Built House

Has anyone yet shown a model house in course of being built and with the scaffolding? Here you have scope for a wonderful range of odd articles—not forgetting the heaps of sand, cement and the pails shaped from dowell rod. Stacks of timber are interesting to make. Then there is the 'Road up' model. Made up on a board with the real 'hole in the road' you can put plenty of imagination into this. People always stand and look at the real thing, so we are sure of an appreciative audience around this.

We know of one model-class member who has secured several first prizes for his 'crashed aircraft' set. This needs some very careful work because you do not make a model aeroplane and crash it. You have to make the aeroplane crashed, which is very much different. Wing sections must be made to show the damaged wings with consideration which way all the parts will fall when the plane crashes. That part is the real test.

Many readers of *Hobbies* must now have become very good model-boat builders. The mere fact that they have a *Hobbies* machine or tool kit makes it simple for these enthusiasts and, therefore, they should this winter try and get going on with some unusual boats. These are most interesting and the variety great. Many of them are of historic value because so many are fast disappearing, but they can remain as models.

There are many sources from which you can obtain pictures, whilst helpful books on the subject can be obtained from your local library.

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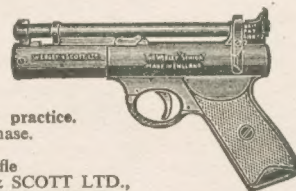
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